

04C0

03/14/01 OIPE

RAW SEQUENCE LISTING
 PATENT APPLICATION: US/09/784,340

DATE: 03/12/2001
 TIME: 10:00:13

Input Set : A:\Seqlist.txt
 Output Set: N:\CRF3\03122001\I784340.raw

ENTERED

2.

4 <110> APPLICANT: WEI, Ming-Hui et al.
 6 <120> TITLE OF INVENTION: ISOLATED HUMAN DRUG-METABOLIZING
 7 PROTEINS, NUCLEIC ACID MOLECULES ENCODING HUMAN
 8 DRUG-METABOLIZING PROTEINS,
 9 AND USES THEREOF
 11 <130> FILE REFERENCE: CL000763
 C--> 13 <140> CURRENT APPLICATION NUMBER: US/09/784,340
 C--> 13 <141> CURRENT FILING DATE: 2001-02-16
 13 <160> NUMBER OF SEQ ID NOS: 5
 15 <170> SOFTWARE: FastSEQ for Windows Version 4.0
 17 <210> SEQ ID NO: 1
 18 <211> LENGTH: 2759
 19 <212> TYPE: DNA
 20 <213> ORGANISM: Human.
 22 <400> SEQUENCE: 1
 23 caaccattgc agatcagtggt gtgagggaac tgccatcatg aggtctgaca agtcagcttt 60
 24 ggtattttctg ctctctgcagc tctctctgtgt tggctgtgga ttctgtggga aagtcctggt 120
 25 gtggccctgt gacatgagcc attggcttaa tgcaagggtc attctagaag agctcatagt 180
 26 gagaggccat gaggtaacag tattgactca ctcaaagcct tcgttaattg actacaggaa 240
 27 gccttctgca ttgaaatttg aggtgggtcca tatgccacag gacagaacag aagaaaatga 300
 28 aatattttgtt gacctagctc tgaatgtctt gccaggctta tcaacctggc aatcagttat 360
 29 aaaattaaat gatttttttg ttgaaataag aggaacttta aaaatgatgt gtgagagctt 420
 30 tatctacaat cagacgctta tgaagaagct acaggaaacc aactacgatg taatgcttat 480
 31 agaccctgtg attccctgtg gagacctgat ggctgagttg cttgcagtcc cttttgtgct 540
 32 cacacttaga attttctgtg gaggcaatat ggagcgaagc tgtgggaaac ttccagctcc 600
 33 actttcctat gtacctgtgc ctatgacagg actaacagac agaattgacct ttctggaaag 660
 34 agtaaaaaat tcaatgcttt cagttttgtt ccaacttctg attcaggatt acgactatca 720
 35 tttttgggaa gagttttata gtaaggcatt aggaaggccc actacattat gtgagactgt 780
 36 gggaaaaagct gagatttggc taatacgaac atattgggat tttgaatttc ctcaaccata 840
 37 ccaacctaac tttgagtttg ttggaggatt gcaactgtaaa cctgccaaag ctttgcctaa 900
 38 ggaaatggaa aattttgtcc agagtccagg ggaagatggt attgtggtgt tttctctggg 960
 39 gtcactgttt caaaatgtta cagaagaaaa ggctaataatc attgcttcag cccttgccca 1020
 40 gatcccacag aaggtgttat ggaggtacaa agggaaaaaa ccatccacat taggagccaa 1080
 41 tactcggtct tatgattgga taccacagaa tgatcttctt ggtcatccca aaaccaaagc 1140
 42 ttttatcact catggtggaa tgaatgggat ctatgaagct atttaccatg gggctccctat 1200
 43 ggtgggagtt cccatatttg gtgatcagct tgataacata gtcacatga aggccaaagg 1260
 44 agcagctgta gaaataaact tcaaaactat gacaagcgaa gatttactga gggctttgag 1320
 45 aacagtcatt accgattcct cttataaaga gaatgctatg agattatcaa gaattcacca 1380
 46 tgatcaacct gtaaaagcccc tagatcgagc agtcttcttg atcgagtttg tcatgcgcca 1440
 47 caaaggagcc aagcacctgc gatcagctgc ccatgacctc acctggttcc agcactactc 1500
 48 tatagatgtg attgggttcc tgcagacctg tgtggcaact gctatattct tgttcacaaa 1560
 49 atgtttttta ttttctgttc aaaaatttaa taaaactaga aagatagaaa agagggaata 1620
 50 gatctttcca aattcaagaa agacctgatg gggtaattct gtttaattcca gccacataga 1680
 51 atttggtgaa aaccttgcta ttttcatatt atctattctg ttattttatc ttagctatat 1740
 52 agcctagaat tccatgatca tgagggtgtg agtatatctc attctttcgt tgcattttcc 1800
 53 taggtgtgct tactctcttc tctcactttg tgacacaagg acatgaatac atctaaattt 1860
 54 tcctatttct gatatcactg tttccatgac gtcattactt ctctaacctt aagtgatagg 1920

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/784,340

DATE: 03/12/2001

TIME: 10:00:13

Input Set : A:\Seqlist.txt

Output Set: N:\CRF3\03122001\I784340.raw

```

55 gtgacctgca atatgctgat toctggtggt tgcacaaaca catggatgta aagaagtaaa 1980
56 aaatgtaaaa ttcacaaaat tcagtaaaacc acacaaatca atgaagcatt ctatgacatt 2040
57 agcttggttat gagtaacata atgatttttc tttttcaatt taaataagcc cttctacata 2100
58 cccagcatta ctgatctcag acaatgaatt gctaaaaatg acgatagggc attacactca 2160
59 gaatagtttg ctatatttcc acataacctca tctagatgtc atagcctaca tttctgccat 2220
60 cacttaactg acattttttg tgtgttcttg atgataaata gacagttctt attattgtcc 2280
61 tcaaataata aaagaaactg aaattttctt acatagagaa aatgtccata agatattcaa 2340
62 gttaaacaga ttatttttgag ataagtaacc attagaaata tgtgattgta atttctgatt 2400
63 ttataaaatt ttaattgata gtacacttga tttaaatgtc tattctttaa aatgatgaat 2460
64 actcataatt cttatctcta taatcaaaag tataatttac tgtagaaaaa taaagagatg 2520
65 cttgttctga aagtaaaaaa aaaaaaaaaa aaaacactgt catgccgtta cgtagcgtat 2580
66 cgttgacagc ccaactgtcat gccgttacgt agcatatcgt tgacagcgac actgtcatgc 2640
67 cgttacgtag cgtatcgttg acagcactgt catgcgttac gagcgtatcg ttgacagcac 2700
68 tgtcatgccg ttacgtagcg tatcgttgac agcaaaaacac tgtcagccgt tacgtagcg 2759

```

70 <210> SEQ ID NO: 2

71 <211> LENGTH: 527

72 <212> TYPE: PRT

73 <213> ORGANISM: Human

75 <400> SEQUENCE: 2

```

76 Met Arg Ser Asp Lys Ser Ala Leu Val Phe Leu Leu Leu Gln Leu Phe
77 1 5 10 15
78 Cys Val Gly Cys Gly Phe Cys Gly Lys Val Leu Val Trp Pro Cys Asp
79 20 25 30
80 Met Ser His Trp Leu Asn Val Lys Val Ile Leu Glu Glu Leu Ile Val
81 35 40 45
82 Arg Gly His Glu Val Thr Val Leu Thr His Ser Lys Pro Ser Leu Ile
83 50 55 60
84 Asp Tyr Arg Lys Pro Ser Ala Leu Lys Phe Glu Val Val His Met Pro
85 65 70 75 80
86 Gln Asp Arg Thr Glu Glu Asn Glu Ile Phe Val Asp Leu Ala Leu Asn
87 85 90 95
88 Val Leu Pro Gly Leu Ser Thr Trp Gln Ser Val Ile Lys Leu Asn Asp
89 100 105 110
90 Phe Phe Val Glu Ile Arg Gly Thr Leu Lys Met Met Cys Glu Ser Phe
91 115 120 125
92 Ile Tyr Asn Gln Thr Leu Met Lys Lys Leu Gln Glu Thr Asn Tyr Asp
93 130 135 140
94 Val Met Leu Ile Asp Pro Val Ile Pro Cys Gly Asp Leu Met Ala Glu
95 145 150 155 160
96 Leu Leu Ala Val Pro Phe Val Leu Thr Leu Arg Ile Ser Val Gly Gly
97 165 170 175
98 Asn Met Glu Arg Ser Cys Gly Lys Leu Pro Ala Pro Leu Ser Tyr Val
99 180 185 190
100 Pro Val Pro Met Thr Gly Leu Thr Asp Arg Met Thr Phe Leu Glu Arg
101 195 200 205
102 Val Lys Asn Ser Met Leu Ser Val Leu Phe His Phe Trp Ile Gln Asp
103 210 215 220
104 Tyr Asp Tyr His Phe Trp Glu Glu Phe Tyr Ser Lys Ala Leu Gly Arg
105 225 230 235 240

```

RAW SEQUENCE LISTING

DATE: 03/12/2001

PATENT APPLICATION: US/09/784,340

TIME: 10:00:13

Input Set : A:\Seqlist.txt

Output Set: N:\CRF3\03122001\I784340.raw

```

106 Pro Thr Thr Leu Cys Glu Thr Val Gly Lys Ala Glu Ile Trp Leu Ile
107      245      250      255
108 Arg Thr Tyr Trp Asp Phe Glu Phe Pro Gln Pro Tyr Gln Pro Asn Phe
109      260      265      270
110 Glu Phe Val Gly Gly Leu His Cys Lys Pro Ala Lys Ala Leu Pro Lys
111      275      280      285
112 Glu Met Glu Asn Phe Val Gln Ser Ser Gly Glu Asp Gly Ile Val Val
113      290      295      300
114 Phe Ser Leu Gly Ser Leu Phe Gln Asn Val Thr Glu Glu Lys Ala Asn
115 305      310      315      320
116 Ile Ile Ala Ser Ala Leu Ala Gln Ile Pro Gln Lys Val Leu Trp Arg
117      325      330      335
118 Tyr Lys Gly Lys Lys Pro Ser Thr Leu Gly Ala Asn Thr Arg Leu Tyr
119      340      345      350
120 Asp Trp Ile Pro Gln Asn Asp Leu Leu Gly His Pro Lys Thr Lys Ala
121      355      360      365
122 Phe Ile Thr His Gly Gly Met Asn Gly Ile Tyr Glu Ala Ile Tyr His
123      370      375      380
124 Gly Val Pro Met Val Gly Val Pro Ile Phe Gly Asp Gln Leu Asp Asn
125 385      390      395      400
126 Ile Ala His Met Lys Ala Lys Gly Ala Ala Val Glu Ile Asn Phe Lys
127      405      410      415
128 Thr Met Thr Ser Glu Asp Leu Leu Arg Ala Leu Arg Thr Val Ile Thr
129      420      425      430
130 Asp Ser Ser Tyr Lys Glu Asn Ala Met Arg Leu Ser Arg Ile His His
131      435      440      445
132 Asp Gln Pro Val Lys Pro Leu Asp Arg Ala Val Phe Trp Ile Glu Phe
133      450      455      460
134 Val Met Arg His Lys Gly Ala Lys His Leu Arg Ser Ala Ala His Asp
135 465      470      475      480
136 Leu Thr Trp Phe Gln His Tyr Ser Ile Asp Val Ile Gly Phe Leu Leu
137      485      490      495
138 Thr Cys Val Ala Thr Ala Ile Phe Leu Phe Thr Lys Cys Phe Leu Phe
139      500      505      510
140 Ser Cys Gln Lys Phe Asn Lys Thr Arg Lys Ile Glu Lys Arg Glu
141      515      520      525

```

144 <210> SEQ ID NO: 3

145 <211> LENGTH: 21000

146 <212> TYPE: DNA

147 <213> ORGANISM: Human

149 <220> FEATURE:

150 <221> NAME/KEY: misc_feature

151 <222> LOCATION: (1)...(21000)

152 <223> OTHER INFORMATION: n = A,T,C or G

154 <400> SEQUENCE: 3

```

155 ttctagagg ttggaacaac ttttccctga tacattgcat ttttttgata ccttcagtac 60
156 atgttaaaact ggcaaccacc agtgaacttt actcttaaaa tattaatttt taacttctgt 120
157 gcttatattg tcatttcaac tccttgetta gtaactaaa aaccattgca gatcagtgtg 180
158 tgagggaact gccatcatga ggtctgacaa gtcagctttg gtatttctgc tcctgcagct 240

```

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/784,340

DATE: 03/12/2001

TIME: 10:00:13

Input Set : A:\Seqlist.txt

Output Set: N:\CRF3\03122001\I784340.raw

```

159 cttctgtgtt ggctgtggat tctgtgggaa agtcctgtgtg tggccctgtg acatgagcca 300
160 ttggcttaaat gtcaagggtca ttctagaaga gctcatagt agaggccatg aggtaacagt 360
161 attgactcac tcaaagcctt cgtaattga ctacaggaag ccttctgcat tgaaatttga 420
162 ggtggtccat atgccacagg acagaacaga agaaaaatgaa atatttgttg acctagctct 480
163 gaatgtcttg ccaggcttat caacctggca atcagttata aaattaaatg attttttgt 540
164 tgaaataaga ggaactttaa aaatgatgtg tgagagcttt atctacaatc agacacttat 600
165 gaagaagcta caggaaacca actacgatgt aacgcttata gacctgtga ttccccgtgg 660
166 agacctgatg gctgagttgc ttccagtcoc ttttgtgtc acacttagaa cttctctaag 720
167 aggcaatatg gagcgaagct gtgggaaact tccagctoca ctttctatg tactgtgccc 780
168 tatgacagga ctaacagaca gaatgacct tctggaaaga gtaaaaaatt caatgctttc 840
169 agttttgttc cacttctgga ttcaggatta cgactatcat ttttgggaag agttttatag 900
170 taaggcatta ggtaagacac ttttgtttta tttttaattt agttatcaaa agaaatattt 960
171 ttaaaaattg tcatacattg tctatgacat atatatgcag gtcaatgagt ttttttagaa 1020
172 aatgtttag ctgtttttca taaagaaagt gtatttgttc taagcgtaag ataacctact 1080
173 ttcttaatac cagtaataata cttaaaaatg atcacaata actaagagat tatattttgt 1140
174 atttcttcca aatagcgcaa atcaacatca catatttttg agaactactg attgttagtc 1200
175 tgaatgttat agaatttcta ttgaaataaa atgctaata ttattttctc tctcatcatg 1260
176 tatttaagaa aatcttcaga aggtcttctt tgaattaaft tttcaagagt cattaatgtg 1320
177 aacattttct agaattcttt aatttcttag gtgattactt cacaaaaact tgaaaaaata 1380
178 ttataaaaag ttaaaaaact tacggtcttg tggggcataa gatagtagaa tttttacttt 1440
179 actgatatac acctatttga cttattttta tttctttgct ttactgataa aaagttgttt 1500
180 tgctttgcaa ttttcatata gttgtgatca gagctgggtc atgcaagaca tgtttttatc 1560
181 caaatatgtt tgagaattat gtagaacat gaaaaaagg acaattatat ccgacactaa 1620
182 aatattgttt aatgtattcc aacgaattct tatgcataga ctgtttcaca gaactaatat 1680
183 tcagaggatc ccagttcaaa tgccttagc cttagacatg atttgaattt acatatattg 1740
184 atttgcttta aataattttc cattcagtaa gctgtgccta gctgcagata gcctaccagg 1800
185 ctttatggat ctaggtaaac aatacaaatc tcttggcctc aagtctacat tcagatatta 1860
186 atttaaaagg gtacagctat atagaggta ctggcaaat ttggtaaat aggattatag 1920
187 taaaagcccc ctgacaagat tgaaatttaa aataaaacaa aagtgttatc aaaggggtga 1980
188 aagagcatth tccaataaac aaaagtgggt tctggccatg cattcagaaa ttccccaaca 2040
189 attctttaaa aatcatggag cagcttgata tataagaaat tcatttaata actatattta 2100
190 ttatgtagct ccaacttact aaattattga ttattatata ttttatagaa ttatctattg 2160
191 tgagtctaaa tcaagagtat atattcaaac aactatagga aaagggatat cagtcaattt 2220
192 caattcaagg attttatttc ataagtgtt acgcacagg gtatttcatt ttattatata 2280
193 ttgctttatt gtccttcaca aaaattgcaa ttacaaaatt aaaggttttt gaaaaccttg 2340
194 aatcaagcta atcaatttgg cgtaattatt ccaacaacaa gtgtgtactt ttgactctat 2400
195 cacatattgg catttatcat gctttttcaa atttttcatt gttatatctg ttacggtgat 2460
196 ctgggatcag tgttcttga tggttacacg tttattagct tgggggcacc ttgatgtgtt 2520
197 acaatataag acagcaaac taattataaa tgttgtgcat gtactaactg ctccgctgat 2580
198 tcgtttcccc atcccacttc ttcttaggcc tccctattcc ctgagacaca gtaatataac 2640
199 atacaatgac ttctaaatgt tccagtgaag agaaaagtag caggctctct aatttaaacc 2700
200 aaaaatataa aggaataagt ttaatgagta ctatagttaa gatattgttt gcttgacct 2760
201 acaaaatcct gtgttgaaat ttgatcacca atattggagg tggggcttga tgggaagtgt 2820
202 tagggctcat agggtagatt ccttatgagt acattaatgc tctccctggg gaaatgggtg 2880
203 agttcgttct cactctatta ggtcccagga gagataatta ttaaaaagag ccaggaacat 2940
204 ccaccttctt tctctgcat atctctcatt atctgatccc tgcacttget ggtccccaac 3000
205 atcttcttca atgagtgag gaaaccagag gtcttcacca gacacagatg ttggtgcat 3060
206 gctcttgtta taccctgaag aattgtgagc caaataaaaa cctttttctt ttacaaatta 3120
207 gacagcctca gttattcctt tgtagcaaca aaaaaagcct gggacaggcc aaaaactaca 3180

```

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/784,340

DATE: 03/12/2001

TIME: 10:00:13

Input Set : A:\Seqlist.txt

Output Set: N:\CRF3\03122001\I784340.raw

```

208 ccattgcacc aaacaggttaa acaagatgtg agtgcaaaagg aaaagttttt ggaggaaatt 3240
209 aaaagtgtcta ctccagtgtta catacaaatg ataagaacaa ataaccatta tcagtgtctga 3300
210 tatggagaaa attttagttg tctggagaga aaatcaaatt agctagccag ctgcagtgat 3360
211 tcatatctgt aatcccagta acttgggagg ctcaggtggg agaacggctt gagcccagaa 3420
212 gtttgaagtc caaggctgca gtgagctatg attgctccac tgcactocaa cctaggtgat 3480
213 agagcaaaaac cactaccaa aaaaaaaaaa aaaaaaagaa gaaaaagaaa agaaaaaaaa 3540
214 ttaaaccaac cacaacatca ccttaggttt tggcattagc taaaaactaa tacatagtaa 3600
215 agcgttaact attcaattgc atgaaacctc agagaggaga ggaagatgca gaaaaaaga 3660
216 ctgaagctag tagaggttga ctaatgaggt ttacaggaa aaactgccta catgatgcaa 3720
217 aagttcaatg tgaagcaata ggaagtcagc cagaagactt agctaataata ctcagtaaat 3780
218 gtggctacag taaacaaatg attttcaatg tagacctaac agccttctgt tggagaaga 3840
219 tgccatttaa aactttcata gctagagaag agaagtcaat gcttgtctct gaagctacaa 3900
220 aaaacaggct gaatctcttg tagtggctaa tgcagctgat gacaaaggta agccaatgc 3960
221 ccatttactt tttgtataa ttatagagga ctcttaataa ttatgttaa tctactttgc 4020
222 ctgtgttata tcaatggaac aacaaagcct ggatgatata acattggtat atgacatggc 4080
223 ttattgaata ttttaagcac actgttgaga cctattgctc aaaaaagagg attcctttca 4140
224 aaatattgct gctcattgac aattcacatg gtcaacaaag ggctctgatt aagatgtaca 4200
225 gatattaatg tttgcctgct tgctattatt acatccatct tacatgccat ggatcatata 4260
226 gccttgactt tcaagtctta tgtaagaaat atattttgta aggtatagc tcttactaat 4320
227 ggggaaagta tattgaaaac cttttcaaaa ggatttttca ttctagattc cattaagaac 4380
228 attcatgggt catgagagga agtcaagata ttaacattaa caagagtttg gaaaaaattt 4440
229 gattctaaact ctctggatg attttgaggg attgaagaca tcatgtgaag aattaactgg 4500
230 ggatgggggt gtcatgaaaa aataaataga attataagt ggctgaagg tttgtctaaa 4560
231 ttgctataat atcatgataa aactaaaacc tgtaaaaccg gtgaggaggt gctttttaaa 4620
232 cagttacttt ttatagatga acacagaaat tggttttgtg agttggaatc ttctccagat 4680
233 gaaaatgcta tgaacattgt tgaatggct acaaatgact tagaatatta cacaaaatta 4740
234 gtagataagg cagcatcaag gtttgagaga atggactcaa attttgaaag aaattctact 4800
235 atgggtaaac tgctgtgaaa catcatcata tgctacagag aaatctttca tgaaaagatg 4860
236 agtcaattca tgcaacaatc tttgtgtct aattttaaaa attgtccagc tgcctgatc 4920
237 aatcaacagt aatcagcact gaggcaagac cctacaccag aaaaaataaa aataaaaaac 4980
238 ctcaacttgc gaagactcag ctattattta gcaactttta gccatacttt taactaaggt 5040
239 atgtgcattc ctttttaaac gtgatgatat tgcacagcta atagcctaca aggtatggtt 5100
240 aacataactt ttatattgctc tgggacccaa atttgtgtga atcactttat tgacatatc 5160
241 cttttattga gatgaactgc aacttatctt gcaatatctc caagatatgt gtgtatggca 5220
242 tttcaataaa gatgtgaaat tattttatta gtataaaaag caaatttaat tttctttcct 5280
243 ttgatcatct ttatccttgt tactgtgtat ttatccttta aacattgaat gactccaatt 5340
244 gtttaaaact gagtctttct taaatgagtc ctaatatcat agtaattaaa atcacctaca 5400
245 agttggtaat gcaggcagca tgtgaggcac agaaaacaac aaatttataa gacataaatg 5460
246 catttgcttg gaagctgaga gaaggtctta ttctaatttc tgataacttc aaactgagta 5520
247 tcttcagtaa aatttattca ctatcaaat caaggcggtt ggatttatga cctaggaaaa 5580
248 aacttcaaac attaaaatgt gatgacctta aaaagaggct ctccacacta tgggtgataa 5640
249 caccaccaac tttgattaga attttaaga gaaacaaatt ctcttatgga gtttatcttt 5700
250 ttatcacttg caaaatatgt ttttgtaaag agataactat tacttagtta tttgtagtta 5760
251 gccattcttc tgattaaaaa cctaaaatta aatcttgaaa atgtgttttc cttcaaaaaca 5820
252 catcatttga gagaaacact aaagtaagt tatgattatc atagcatgta cataggtgct 5880
253 tcacaacca aaaagaatat tgtcatgggt aagaatcagt aaaggaattt ctccataaa 5940
254 aacagtagcc tattaattaa agtaatgata tgcaatacag caagttaaag ggaactgac 6000
255 ctggtgggat tattgaaaga tatacccttg actatagatt agaaaataca gagatgttat 6060
256 ttagtgaaga tattgtggta ctcatttatc atctgcaatt cacttgacga ggaaaaaatg 6120

```

VERIFICATION SUMMARY

PATENT APPLICATION: US/09/784,340

DATE: 03/12/2001

TIME: 10:00:14

Input Set : A:\Seqlist.txt

Output Set: N:\CRF3\03122001\I784340.raw

L:13 M:270 C: Current Application Number differs, Replaced Current Application No
L:13 M:271 C: Current Filing Date differs, Replaced Current Filing Date
L:367 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3
L:368 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3
L:438 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3
L:439 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3